

**AMENDMENTS TO THE CLAIMS**

**1. (Currently amended)** A high-throughput method for producing a plurality of monoclonal antibodies, each of which binds to a different candidate antigen, said method comprising the steps of:

- a) introducing a plurality of purified candidate antigens into an animal or animals;
- b) recovering antibody-producing cells from said animal or animals and rendering these cells into a single cell suspension;
- c) generating immortalized cell lines from said single cell suspension;
- d) screening the supernatant of said immortalized cell lines against a protein chip or protein chips on which the purified candidate antigens are displayed; and
- (e) selecting monoclonal antibodies that bind to said candidate antigens.

**2. (Previously presented)** The method of claim 1, wherein said animal or animals is a mouse, a rat, a guinea pig or a rabbit.

**3. (Cancelled)**

**4. (Previously presented)** The method of claim 1, wherein between two and fifty different purified candidate antigens are introduced into each animal.

**5. (Previously presented)** The method of claim 4, wherein between 0.001 and 1000 micrograms of each antigen is introduced into each animal.

**6. (Currently amended)** The method of claim 1, comprising the additional step of supplying the animal or animals with a booster dose of some or all of the antigens which were introduced into the animal or animals prior to the removal of antibody-producing cells.

**7. (Previously presented)** The method of claim 1, wherein the antibody-producing cells are B cells, T cell or stem cells.

**8. (Previously presented)** The method of claim 1, wherein the antibody-producing cells are recovered by removal of spleen tissue, lymph nodes or bone marrow of the animal or animals.

**9. (Previously presented)** The method of claim 1, wherein the immortalized cell lines are hybridoma cell lines produced by somatic fusion of the cells in the single cell suspension to myeloma cells.

**10. (Previously presented)** The method of claim 1, wherein said protein chip or protein chips is a plain-glass slide, a 3D gel pad chip, a microwell chip or a cell chip.

**11. (Previously presented)** The method of claim 1, wherein the step of detecting the monoclonal antibodies bound to the antigens further comprises isotyping the monoclonal antibodies.

**12. (Previously presented)** The method of claim 11, wherein said step of detecting and isotyping the monoclonal antibodies comprises adding isotype specific anti-immunoglobulin antibodies to said protein chip or protein chips, wherein each anti-immunoglobulin antibody having a different isotype specificity has a different label, and detecting the presence of said labels.

**13. (Previously presented)** The method of claim 1, further comprising assessing the specificity with which each isolated monoclonal antibody binds to an antigen using a protein chip or protein chips comprising said antigen.

**14-15. (Cancelled)**

**16. (Withdrawn)** A method for producing an immortalized cell line that produces a monoclonal antibody of interest, said method comprising the steps of:

- a) introducing at least one candidate antigen into an animal;
- b) recovering antibody-producing cells from said animal and rendering these cells into a single cell suspension;
- c) generating an immortalized cell line from said single cell suspension;
- d) screening the supernatant of said immortalized cell line against a protein chip on which the candidate antigen is displayed; and
- e) selecting as said immortalized cell line, that which produces a supernatant containing an antibody that binds to said candidate antigen.

**17. (Withdrawn)** An immortalized cell line isolated by the method of claim 16.

**18-19. (Canceled)**

**20. (Withdrawn)** A monoclonal antibody isolated by the method of claim 1.

**21. (Withdrawn)** An antibody according to claim 20 which is an anti-idiotypic antibody.

**22. (Withdrawn)** An antibody according to claim 21 which is an anti-anti-idiotypic antibody.

**23. (Withdrawn)** An immortalized cell line producing a monoclonal antibody of claim 20.

**24. (Withdrawn)** An immortalized cell line according to claim 23 which is a hybridoma cell line.

**25. (Withdrawn)** A bank of antibodies according to claim 20.

**26. (Withdrawn)** A bank of immortalized cell lines according to claim 15.

**27. (Currently amended)** A method of identifying a plurality of monoclonal antibodies, each of which binds to a different candidate antigen, said method comprising the steps of:

- a) screening the supernatant of immortalized cell lines against one or more protein chips on which the purified candidate antigens are displayed; and
- b) selecting monoclonal antibodies that bind to said candidate antigens, said method being characterized in that said immortalized cell lines are generated from a single suspension of antibody-producing cells that produce antibodies against a plurality of antigens.